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AUTOMOBILE MARKETING STRATEGIES, PRICING, AND PRODUCT PLANNING

Marc L. Hagerman

John Z. De Lorean Corporation
100 W. Long Lake Road
Bloomfield Hills MI 48013

APRIL 1978
FINAL REPORT

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16. Abstract

The objective of this study was to determine the decision-making processes concerning major model year product introductions and alterations in the automotive industry as well as to investigate techniques of price positioning, product and image positioning, and the use of incentives and other promotional tools. The method used was to establish the new models introduced since the last traditional year (1959) in the automotive industry, and to discuss their features and positioning in the market place.

It can be concluded that the automotive industry reacts to competition, dealer influences, consumer preference and government regulations. Also each automotive manufacturer reacts differently in comparable situations.

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PREFACE

The examinations in this study tend to emphasize General Motors, since this corporation has accounted for between 40 and 50 percent of the total market from the post World War II period to the present. They have the acknowledged product leaders, the most dealers, and have the greatest number of vehicles in the current vehicle population census. Another reason for the emphasis on General Motors is the working backgrounds of the personnel of the John Z. De Lorean Corporation.

The Ford Motor Company, which represents another 20 percent of the market, is also examined closely. Combining General Motors and Ford Motors gives coverage of over 70 percent of the U.S. market in these evaluations. The examination does include the other domestic automotive manufacturers but not in as great detail.

The examination starts with the last traditional year in the automotive industry - the 1959 model year. The 1960 model year was the start of carline proliferation and subsegmentation in the automotive industry.

Our report displays how automotive manufacturers react to competition both domestic and foreign, dealer influences, consumer preferences, external influences and government regulations. The report shows that the automotive industry, as it concerns the product carline decision-making process, is really accomplished not as a science but as an art form.

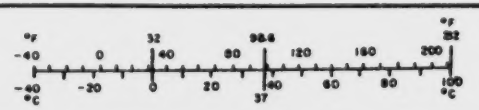
METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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CONTENTS

Section		Page
1.	PRODUCT INTRODUCTIONS AND ALTERATIONS.....	1
	1.1 Background.....	1
	1.2 Meeting The Foreign Car Competition...	2
	1.3 Model Year Analysis.....	3
	1.4 Body Sharing By Divisions.....	9
	1.5 Influences On New Model Decisions.....	9
	1.6 Product Alterations.....	10
	Time Constraints.....	11
	1.7 Economic Projections.....	11
	1.7.1 Future Competition.....	11
	1.7.2 Future Design.....	12
	1.8 Product Planning.....	12
2.	INDUSTRY PRICING.....	14
	2.1 General Motors - Intra-Divisional.....	14
	2.2 Pricing - Competitive.....	15
	2.2.1 Discounts.....	16
	2.2.2 Concept Pricing.....	16
3.	MARKETING SEGMENTATION.....	20
	3.1 Segmentation Of The Product.....	20
	3.2 Positioning In The Marketplace.....	23
4.	DEALER RELATIONS.....	25
	4.1 Dealer Incentives.....	25
	4.1.1 Dealer Incentives - Cash.....	25
	4.1.2 Dealer Incentives - Awards.....	25
	4.2 Consumer Incentives.....	27
	4.2.1 Consumer Incentives - Cash.....	27
	4.2.2 Consumer Incentives - Awards...	27
	4.3 Sales Training.....	28
	4.4 Dealer Franchise - Planning Potential.	28

CONTENTS (CONT.)

Section		Page
5.	SUMMARY AND CONCLUSIONS	30
5.1	New Model Introductions	30
5.2	Pricing	30
5.3	Market Segmentation	31
5.4	Dealer Relations	31
APPENDIX A -	NEW MODEL INTRODUCTIONS	33
APPENDIX B -	MODEL YEAR RETAIL DELIVERIES BY MARKET SEGMENT	34
APPENDIX C -	REFERENCES	37

LIST OF TABLES

Table		Page
1-1.	THE LAST TRADITIONAL YEAR	1
1-2.	TYPICAL-MODEL SERIES LINE-UP	2
1-3.	THE FIRST DOMESTIC COMPACTS	3
1-4.	1977 GENERAL MOTORS BODY TYPES	9
2-1.	1965 INTRODUCTORY LIST PRICES-GM STANDARD CARS	14
2-2.	1965 INTRODUCTORY LIST PRICES-GM INTERMEDIATE CARS	14
2-3.	1965 INTRODUCTORY PRICES-COMPETITIVE STANDARD CARS	15
2-4.	1965 INTRODUCTORY PRICES-TYPICAL VEHICLE PRICING	15
2-5.	PRICE COMPARISON - GRANADA VS VERSAILLES	17
3-1.	MARKET SEGMENTATION - SMALL AND ABOVE	20
3-2.	MARKET SEGMENTATION - INTERMEDIATE AND ABOVE	20
3-3.	INTERMEDIATE SEGMENT	21
3-4.	INTERMEDIATE SEGMENT - LUXURY	22
3-5.	PRICE POSITIONING	23
4-1.	DEALER PLANNING POTENTIAL	29

1. PRODUCT INTRODUCTIONS AND ALTERATIONS

TABLE 1-1. THE LAST TRADITIONAL YEAR

1959 Model Year Carlines

Segment	GM	Ford	Chrysler	Foreign
High	Cadillac	Continental	Imperial	
Medium	Buick	Mercury	Chrysler	
	Oldsmobile		De Soto	
	Pontiac		Dodge	
Standard	Chevrolet	Ford	Plymouth	
Specialty	Corvette	Thunderbird		
Low				All

1.1 BACKGROUND

The model year 1959 was the last year for the traditional alignments which had been in effect since the end of World War II (Table 1-1). At that time, Oldsmobile meant only one thing -- an Oldsmobile. The purchasing consumer knew which car competed with which car, even though he may not have known which one of the "Big Three" corporations produced the car. All foreign cars were considered in the low segment regardless of size or price.

Foreign cars reached a peak of 10.1% penetration of the total U. S. market. The only domestic specialty cars with any appreciable volume were the Chevrolet Corvette and Ford Thunderbird.

Through the years, General Motors had established its family of offerings, using Chevrolet as the base product and moving upwards to Pontiac, Oldsmobile, then Buick and Cadillac. In moving up the ladder, features were added to the product at each step. Ford and Chrysler Corporations followed the same pattern.

Basically, each carline offered three series (good-better-best) with minor product differences. The main differences were cosmetic exterior features and higher grades of materials and appointments for the interior. Sometimes items that were optional on low series were standard on the high series.

TABLE 1-2. TYPICAL-MODEL SERIES LINE-UP

Seg.	2 Dr Sedan	4 Dr Sedan	2 Dr Hardtop	4 Dr Hardtop	Conv.	4 Dr Wagon 6 Passen.	4 Dr Wagon 9 Passen.
Low	X	X				X	X
Medium	X	X	X				
High		X	X	X	X	X	X

The line-up shown in Table 1-2 was typical for the standard and medium segments, with basic vehicles offered in the low series and more expensive body types in the higher series.

Government regulations were very minimal and consisted basically of state laws having such requirements as windshield washers in Michigan, width limits in Pennsylvania, photometric requirements in California, left outside rearview mirror in Ohio, and so on.

Very little market research was done by the manufacturers as to customer preferences or needs. Sales statistics were the basic guidelines.

1.2 MEETING THE FOREIGN CAR COMPETITION

The year 1960 saw the start of model proliferation and subsegmentation. That year featured the "Big Three" U. S. auto corporations response to the foreign car invasion. Each corporation took a different approach as to their product offering. Ford, with their Falcon, offered a scaled down, conventional, not highly styled, basic small car. Chrysler's Valiant was similar to the Falcon; however, it was slightly larger and had sculptured styling.

The most popular foreign car was the VW with rear engine, air cooling, and independent rear suspension. Chevrolet's Corvair was inspired by the VW except that it appeared in a larger version for improved interior comfort and had more acceptable styling.

TABLE 1-3. THE FIRST DOMESTIC COMPACTS

Model	1960 Model Year Retail Deliveries
Falcon	417,200
Corvair	215,800
Valiant	164,300

Ford's interpretation of the consumers' needs resulted in a clear sales winner with its Falcon as shown in Table 1-3.

1.3 MODEL YEAR ANALYSIS

1961 Model Year

Pressures were building in dealer organizations other than Chevrolet and Ford for product representation in the compact/low/foreign segment. These pressures took many forms. However, the greatest was a threat from dealers that they would deal with a foreign product offering. Also, the car divisions that did not have representation in the low end were losing their share of total market penetration.

This situation was particularly true in General Motors with Pontiac, Oldsmobile, and Buick Divisions and their dealer bodies. Hence, in 1961, GM introduced the Pontiac LeMans, Oldsmobile F-85, and the Buick Special. The line of cars was dimensionally slightly larger than the Corvair. These carlines were the forerunners of the current intermediate size cars.

1962 Model Year

In an attempt to meet the dominance in its class which the Ford Falcon continued to demonstrate, Chevrolet made two moves. The first was to upgrade the Corvair to the more luxurious Monza model. The second was to introduce a new, conventionally constructed model, the Chevy II.

Ford Motor Company responded in the compact class with slightly larger models, the Ford Fairlane and Mercury Comet to counteract the Chevrolet, Pontiac, Oldsmobile and Buick carline

offerings.

1963 Model Year

No new models were introduced in the low end of the market by any manufacturers for the 1963 model year. However, Buick introduced the first of the high priced personal luxury cars, the Riviera.

1964 Model Year

During the 1961-1963 period it became apparent to GM that it was very difficult for the consuming public to think in terms of compact cars when they thought of Pontiac, Oldsmobile, or Buick. Therefore, in the 1964 model year, GM introduced the new sized intermediates, Chevrolet Chevelle, Pontiac Tempest, Oldsmobile F-85, and Buick Special.

Ford had determined that there was a large consumer preference for a "real" sporty car in the compact market, hence, the Mustang. Chrysler introduced a car later in the model year, called the Plymouth Barracuda, to compete in the Mustang class. With all of its new entries since 1960, GM raised its production penetration from 48.1% in 1959 to 54.1% in 1964 for U. S. domestic production on a total industry base of 5,568,046 to 7,890,919 units for the same periods. General Motors had to feel they were on the "right track" with their product offerings.

Ford Motor Company's production penetration dropped from 30.2% in 1959 to 26.2% in 1964, even with the highly successful introductions of the Falcon, Comet and Mustang.

1965 Model Year

In the 1965 model year, Chrysler Corporation brought out the Plymouth Belevedere and the Dodge Coronet to compete against the GM and Ford entries in the intermediate seqment. These two entries gained 3.7% of the total U. S. model year retail deliveries for a total of 325,900 units.

1966 Model Year

In 1966, Oldsmobile introduced the Toronado in the personal luxury class. It shared its body with the Buick Riviera. However, it had front wheel drive, which was a product innovation new to GM's domestic production,

1967 Model Year

In the 1967 model year, GM introduced three new carlines, the Chevrolet Camaro, the Pontiac Firebird, and the Cadillac Eldorado. Tne first two offerings were targeted against the Ford Mustang's growing segment of the market. The Eldorado was a derivation of the Oldsmobile Toronado. Ford introduced the Mercury Cougar as a bolster to the Ford Mustang. The sporty car segment declined from its high sales peak soon after these introductions.

1968 Model Year

In 1968, Ford introduced its personal luxury car, the Continental Mark III, to compete against the Cadillac Eldorado.

1969 Model Year

In the 1969 model year, Pontiac introduced its medium priced personal car, the Grand Prix, making personal and/or sporty cars available in every segment from low to luxury. Ford introduced the Maverick as a slightly smaller version of the Fairlane. Ford's intent was to capture as much as possible of the low/ foreign market before the introduction of the 1971 Pinto.

1970 Model Year

In 1970 Chevrolet introduced the Monte Carlo to compete with the popular Grand Prix.

1971 Model Year

Imports during the late 1960's had been rising at a steady rate. Model year retail deliveries in 1965 were 5.9% of Total U.S. Deliveries and had risen to 12.5% in 1970. This was due in part to

the U.S. manufacturers abdication at the low price end of the market by emphasizing more expensive (Chevy II-Nova) and sporty (Camaro-Firebird) models versus the foreign entries. Also contributing to the foreign car success was the sizing up by GM's Buick, Oldsmobile, Pontiac Divisions from the compact to the intermediate segment.

With the foreign car's continued success, Chevrolet and Ford introduced the Vega and Pinto in an attempt to stem the tide in the 1971 model year.

Even with Vega and Pinto selling a combined 560,300 units for the 1971 model year for 6.2% of the U. S. total retail deliveries, foreign car penetration continued to increase. This was more than likely due to the heavy emphasis by all manufacturers, both domestic and foreign, of the advantages of small/sub-compact cars.

At the same time that the Vega was introduced, Pontiac was given a version of the Nova to sell, the Ventura. The Nova was Chevrolet's lowest priced car prior to the Vega introduction.

1972 Model Year

No new carlines were introduced in 1972 model year.

1973 Model Year

In 1973, Oldsmobile and Buick introduced entries in the growing compact market which were similar to the Nova. These models were the Omega and Apollo. These dealer bodies wanted representation in this market.

1974 Model Year

By the time the Mustang was introduced in April 1964, all vehicles classified as small specialty/sporty had grown in size and weight from approximately 2,5000 to 3,400 pounds in 1973. The weight was even higher when considering increased optional equipment installation rates, such as air conditioning and power steering, brakes, and optional larger, higher performance engines.

Many studies had shown that a return to a smaller, lower

weight specialty/sport car would be a success. This market had been declining from 10.7% of the total U. S. retail deliveries in 1967 to 3.0% in 1973. The introduction of a new, down-sized Mustang II in 1974 increased Ford's unit sales for the model year from 121,900 in 1973 to 285,000 for 1974. This increased the market share from 3.0% in 1973 to 5.5% in 1974.

1975 Model Year

The 1975 model year was the earliest year that the U. S. industry could react to the oil embargo of late 1973 and early 1974. It had become evident that fuel economy was becoming of increasing importance to new car buyers.

The 1975 model year introductions featured eleven new carlines, against a total production of fifteen carlines by all U. S. manufacturers in 1959. Ford introduced two new carlines to compete in the compact market, the Ford Granada and Mercury Monarch. This segment had grown from 11.7% in 1971 to 16.2% in 1974 model year total U. S. retail deliveries. Ford, in its desire to gain penetration into the low-end/compact segment, introduced its entirely new vehicles to go along with the still offered Maverick and Comet. Consumers at times perceived the Granada and Monarch to be in the intermediate segment closer to the Torino than to the Maverick. Ford also introduced the Mercury Bobcat as a companion to the Ford Pinto in the growing sub-compact segment.

General Motors introduced their version of the down-sized compact specialty/sport models--the Chevrolet Monza, Oldsmobile Starfire, and Buick Skyhawk. These additional offerings increased the market share of this segment 2 percentage points from 1974 to 1975. In addition, Pontiac introduced its version of the Vega, called the Astre, to compete in the sub-compact segment.

AMC introduced the Pacer to compete in both compact and compact specialty/sport segments. Chrysler Corporation introduced their versions of the intermediate personal luxury segment, the Chrysler Cordoba and Dodge Charger. These vehicles were to compete against the Pontiac Grand Prix and the Chevrolet Monte Carlo.

1976 Model Year

In 1976, Chevrolet brought out its mini/sub-compact, the Chevette, to compete with vehicles priced lower than the Vega. This car was also a delayed result of the OPEC embargo. Pontiac introduced its version of the Monza, the Sunbird.

Chrysler Corporation reacted to Ford's 1975 double entry in the compact market. Plymouth introduced the Volare to go with its Valiant and Dodge introduced the Aspen to accompany the Dart. This market segment increased to 19.4% for 1976 total U.S. model year retail deliveries.

1977 Model Year

The 1977 model year introductions displayed two different approaches to down-sizing. GM took the bold approach in risking possible volume loss by completely reducing in both exterior size and weight their traditional standard carlines, the Chevrolet Caprice, Pontiac Bonneville, Olds 88-98 and Buick LeSabre and Electra and Cadillac's models except for the Seville and Eldorado.

Even at this early date, it can be said that the new carlines have been a complete success. Ford, on the other hand, directed its efforts to the intermediate class and introduced the new LTD II, Thunderbird, and Mercury Cougar, to replace the Ford Torino and Mercury Montego in the intermediate segment. This move of maintaining the standard car size and weight and repositioning the intermediate has been a success for Ford so far.

TABLE 1-4. 1977 GENERAL MOTORS BODY TYPES

Type	Chevrolet	Pontiac	Oldsmobile	Buick	Cadillac
A	Chevelle	Le Mans	Cutlass	Century	
As	Monte Carlo	Grand Prix			
B	Caprice	Pontiac	88	LeSabre Riviera	
C			98	Electra	DeVille
D					Limo
E			Toronado		Eldorado
F	Camaro	Firebird			
H	Vega	Astre			
Hj	Monza	Sunbird	Starfire	Skyhawk	
K					Seville
T	Chevette				
X	Nova	Ventura	Omega	Apollo	
Z	Corvette				

1.4 BODY SHARING BY DIVISIONS

Another aspect to be considered is the sharing of body sizes by the producing divisions; Table 1-4 shows the body size line-up for General Motors for 1977. When the Chevrolet Caprice was down-sized for 1977, it also affected the other four divisions. The same practice of body sharing by divisions exists with Ford Motor Company and Chrysler Corporation.

1.5 INFLUENCES ON NEW MODEL DECISIONS

Mainly, the manufacturers react to developing market situations. Among the chief influences on new product decisions are the following:

1. Individual dealer bodies may exert pressure for new product offerings.

2. Individual manufacturing and selling divisions may have certain ideas for product features.

3. In the past, the new vehicle was designed, engineered and built without market research, but today, product decisions rely heavily on market research and analysis.

1.6 PRODUCT ALTERATIONS

Basically, in the past, the automobile industry was governed by a system of cyclical change. The product was introduced, followed by an appearance change for the second year, a minor change in the third, a major change in the fourth year, an appearance change the fifth year and a new product in the sixth year.

This condition has somewhat changed especially with manufacturers reacting to consumer preferences in developing subsegments of the total market. These many subsegments have produced tremendous carline proliferations. For example, in 1959 Chevrolet had only the standard car plus the Corvette, but today offers eight separate carlines. It would be very difficult and expensive to adhere to the traditional cycle of change with this many models. Indeed, in recent years a certain body of consumers has reacted unfavorably to arbitrary style changes on the domestic models. When Chevrolet introduced the Vega in 1971, they stated that they would make changes in the car only to improve its function or reliability. We may also see the manufacturers carry on a particular body design for more than the traditional five years in the future.

Indeed, the automobile manufacturers, particularly General Motors, have not held to the five year pattern, particularly if a carline has not sold well. For example, the Pontiac Tempest, Oldsmobile F-85, and the Buick Special introduced in 1961 and based on the Corvair, lasted only through 1963 before being increased in size with all new models.

Ford follows a pattern basically similar to General Motors' approach to product alteration. Chrysler has been hampered by its economic situation as to its product offerings and entries into sub-segments. For example, rather than domestically producing a vehicle in the sub-compact segment opposite the Chevrolet Vega and Ford Pinto, it has imported four separate carlines (Simca-Rootes, Cricket, Arrow and Colt) since the 1971 model year.

Time Constraints

The time required to produce a "new" model varies considerably. A completely new vehicle including power train takes approximately three to five years for production after design approval. A completely new vehicle less power train usually car be completed from design state approval to factory build in two years. A reskined vehicle with same power train and wheelbase can be produced in one and one-half years. All other body changes including face-lifts, new roofs, new front and rear ends, and the like, can be accomplished in approximately one year.

1.7 ECONOMIC PROJECTIONS

Projections of a long-range nature of the future economic climate are not used in product decisions. The automobile industry is of the opinion that for every economist, there is a different future economic climate. However, economic forecasts are used on a quarterly basis for one year projections and are correlated to sales forecasts. General Motors has recently led the industry with the most optimistic sales forecasts. In the last two years, they have exceeded their annual predictions of sales volume.

1.7.1 Future Competition

General Motors is not greatly influenced by what it thinks competition might do in the way of product offerings in the future. General Motors presently relies on its vast amount of marketing research (attitudinal, probability and product clinics) to determine product requirements and consumer intentions. This is not to say that General Motors does not follow competition, since the Camaro and Firebird were introduced several years after the Ford Mustang. It took GM that long to be satisfied as to the total potential of the market segment. However, the foregoing example is the exception rather than the rule. General Motors, with its five car divisions, can be below, meet head-on, or over-lap any of its competition with its product offerings.

General Motors, as well as all automotive manufacturers, purchase their competitors' products. These vehicles are frequently subjected to extensive performance and durability tests and are compared on an equal basis with GM's vehicles. These products are also torn down and analyzed to determine manufacturing and design savings possibilities.

1.7.2 Future Design

The automotive industry's future designs traditionally have been created by the designer/stylist. However, the automotive fuel economy, environmental and safety regulations are taking the prime role in the design of future vehicles. After the future design and basic marketing strategy are established, the only constraint is the corporation's financial capability to provide capital equipment and tooling. The basic plan is usually never terminated, but only compromised if there is a lack of funds or if the funds become directed towards other projects.

A classic example is AMC which desired to have another entry in the compact segment, the Pacer. They wanted this to be a distinctive model, but could not support tooling for special assemblies and components other than the structure and exterior sheet metal. Hence, the compromise resulted in having a vehicle in the compact segment weighing approximately 3,200 pounds with poorer gas economy than others in this segment.

Other examples are the 1975 Chevrolet Monza, Oldsmobile Starfire and Buick Skyhawk. It was originally intended that these vehicles have their own separate chassis, suspension, wheelbase, etc.. The compromise, dictated by economic considerations, was to use the Vega Monza package for them instead.

1.8 PRODUCT PLANNING

The increasing complexity and costs associated with bringing

a new model car to the market have resulted in the establishment of a new discipline - that of a formalized product planning operation now practiced by all manufacturers. Ford is credited with originating the techniques of modern product planning, starting in about 1957. Generally, product planning is concerned with the analysis of data pertaining to market research, sales, manufacturing, government requirements, and the like. From such analysis, formalized requirements for each car model's features are established. These requirements serve as the control documents for the designers, engineers, and manufacturing and marketing specialists during the development of a new model. Both Ford and Chrysler established centralized product planning operations before General Motors. General Motors delayed until the early 1970's before becoming convinced of the usefulness of a formalized product planning function.

The product planner's role is largely one of coordinating the efforts of others in new model development. Product planners are not responsible for the execution of the development tasks. These are left to others to accomplish - the designers, draftsmen, computer programmers, tooling engineers, and test engineers actually carry out the myriad tasks involved in the production of a new model. But the product planner is charged with the establishment of realistic criteria with a high probability of success which directs the entire enterprise.

The product plans for each model include the establishment of interior and exterior dimensions, engines, transmissions, suspensions, accessories and features to be offered. A considerable amount of trade-off analysis must be done and preliminary cost targets are established in the product plans. The development of computer based data storage techniques has proven to be of inestimable value to the product planning function.

2. INDUSTRY PRICING

2.1 GENERAL MOTORS - INTRA-DIVISIONAL

It can be generally stated that General Motors has been the major influence in the establishment of automotive industry pricing since the 1950's. Also, it can be concluded that Chevrolet's product offerings are the bench mark within General Motors. There are a few exceptions, like Ford's desire to price closer to actual competition when introducing a new vehicle in a segment where it had no previous representation. For example, when Ford introduced the Falcon in 1960, they positioned the base price closer to the VW than the Chevrolet Corvair. The same position held true for the Pinto introduction prices.

TABLE 2-1. 1965 INTRODUCTORY LIST PRICES - GM STANDARD CARS

Car	4 Dr. Sedan 8 Cyl.
Chevrolet Impala	$2,539
Pontiac Catalina	$2,553
Oldsmobile Jetstar 88	$2,678
Buick LeSabre	$2,682
Cadillac Calais	$4,779

Table 2-1 illustrates how Chevrolet is the base vehicle within General Motors and how the list prices increase up the line to the Cadillac entry. It should be noted that some equipment is standard on the more expensive product offerings that is optional on the Chevrolet.

TABLE 2-2. 1965 INTRODUCTORY LIST PRICES - GM INTERMEDIATE CARS

Car	4 Dr. Sedan 6 Cyl.
Chevrolet Chevelle 300	$2,002
Pontiac Tempest	$2,108
Oldsmobile F-85	$2,186
Buick Special	$2,186

Table 2-2 illustrates the same trend as the previous table which shows Chevrolet to be the base point for General Motors. The four models listed employed a commonly shared body; the price increases are justified by providing more luxurious interiors and appointments in the Pontiac, Oldsmobile and Buick models. Since Chevrolet is the base point for General Motors and is traditionally the largest selling division, it is therefore assumed to be the base point for automotive industry pricing.

2.2 PRICING - COMPETITIVE

TABLE 2-3. 1965 INTRODUCTORY PRICES - COMPETITIVE STANDARD CARS

Car	4 Dr. Sedan 6 Cyl.		
	Chevrolet	Ford	Plymouth
Biscayne/Custom/Fury I	$2,202	$2,198	$2,214
BelAir/Custom 500/Fury II	$2,297	$2,292	$2,309
Impala/Galaxie 500/Fury III	$2,439	$2,442	$2,451

Table 2-3 illustrates how closely the competitive products are priced. The automotive industry uses two types of pricing for analysis. In the first instance the base vehicle with its standard equipment is compared with a competitive vehicle with its standard equipment. This is called comparable vehicle comparison. The other price analysis is the typical vehicle comparison. A hypothetical example appears in Table 2-4.

TABLE 2-4. 1965 INTRODUCTORY PRICES - TYPICAL VEHICLE PRICING

Car	Chevrolet	Ford
Impala/Galaxie 500 (base)	$2,439	$2,442
Automatic Transmission	225	230
V-8 Engine	100	100
AM Radio	56	54
Power Steering	110	105
W/S/W Tires	40	39
	$2,970	$2,970

A typical option included in this type of comparison is one that has over 50% installation rate on the particular vehicles. The foregoing illustrates that not only is the base vehicle price important but also the typically purchased options when compared with competition.

In the past, it has been said in the automotive industry that the options make the profits and that the car is sold only to sell the options. However, today's practice is to install more optional equipment as standard at the lower end of the offerings. For example, power steering and power brakes are standard on the Chevrolet Caprice. This is done for many reasons: 1) safety and durability reasons; 2) during price regulation period; 3) deproliferation of options or accessories; and 4) EPA-ability of the manufacturer to qualify fewer variations of power trains. However, the options are added in at close to list price and allow 100% installation rates, thus increasing profits.

2.2.1 Discounts

Dealer discounts for domestically produced vehicles are basically the same in each segment. For example, the same discount from the list price applies to the Chevrolet Caprice, Ford LTD, and Plymouth Grand Fury. The same holds true for other segments. Although the absolute percentage of the discount may vary, generally it is greater for the higher priced models.

2.2.2 Concept Pricing

Concept and image pricing is done in the automotive industry but mostly in the high end of the market where pricing latitude is available. Probably the most noteworthy recent examples is the recently introduced Lincoln Versailles and the Cadillac Seville. The Versailles model is derived from the Ford Granada 4 door sedan and Table 2-5 compares the pricing of the standard and optional equipment of the two models.

TABLE 2-5. PRICE COMPARISON - GRANADA VS VERSAILLES

	V-8 4 Dr. Sedan	
Size/Equipment	Ford Granada	Lincoln Versailles
Wheelbase	109.9"	109.9"
Overall Length	197.7"	200.9"
Overall Height	53.2"	54.1"
Curb Weight (lb.)	3,360	3,922
Base Vehicle List Price	$4,088.00	$11,500.00
Equipment Comparison		
V-8 350 Engine	$ 247.00	Std.
Automatic Transmission	186.00	Std.
Power Steering	137.00	Std.
Power Four Wheel Disc Brakes	246.00	Std.
Power Windows	145.00	Std.
Air Conditioning	500.00	Std.
Tinted Glass	51.00	Std.
W/S/W Steel Belted Radials	40.00 (e)	Std.
Space Saver Spare Tire	N/C	Std.
Intermittent Wipers	25.00 (e)	Std.
54 AMP Hr. Battery	17.00	Std.
Illuminated Entry System	47.00	Std.
Triple Note Horn	20.00 (e)	Std.
Coolant Recovery System	5.00 (e)	Std.
Inside Hood Release	5.00 (e)	Std.
Vinyl Roof	101.00	Std.
Remote Control Left & Right Hand Outside Mirror	47.00	Std.
Bumper Protection	65.00	Std.
Forged Aluminum Wheels	213.00	Std.
Cornering Lamps	40.00	Std.
Side Protection Moldings	36.00	Std.
Digital Clock	42.00	Std.
Light Group	40.00	Std.
Illuminated Vanity Mirror	42.00	Std.
Power Seat 4-Way	131.00	Std.
AM/FM/MPX	349.00	Std.
Luxury Decor	618.00 (b)	Std.
Metallic Glow Paint	57.00	Std.
Automatic Parking Brake Release	7.00	Std.
TOTAL OPTIONS	$3,459.00	
TOTAL PRICE	$7,547.00	$11,500.00
Differential $3,953.00		

(e) Estimated Prices
(b) Includes some of the other options used for illustration purposes.

The foregoing comparison results in two functionally similar models of the Ford Granada and the Lincoln Versailles. Dimensionally there is very little difference. The difference in weight is basically caused by the greater amount of standard equipment on the Lincoln Versailles. For example, air conditioning weighs approximately 70 pounds; power steering 30 pounds; the V-8 engine is about 100 pounds heavier than the basic six cylinder, and so on. With all of these options added to the base vehicle, vehicle weight increases closely to the 562 pounds differential. In addition, the Versailles has additional weight in insulation and sound deadening materials. The same frame, power train, inner panels, etc., are common to both vehicles. The only real differences are minor changes to the exterior skin of the two vehicles.

Tooling for the specific exterior parts of the Versailles could not cost over $1,000 per vehicle over a three-year period at planned sales volumes of approximately 100,000 units for each year. Therefore, with a specific allocated tooling bill of $1,000 per vehicle, and an additional estimated $500.00 for special items on the Versailles, the differential is approximately $2,500 pure net profit to Ford Motor Company.

The same analysis can be made between the Chevrolet Nova and Cadillac Seville. However, it is more difficult since the Cadillac Seville has its own unique body (inner and outer) with a different wheelbase and an electronic fuel injected engine not offered as optional anywhere in General Motors. The base list price of the Cadillac Seville is nearly $2,000 over the Lincoln Versailles, and this amount should more than pay for amortization for uniqueness of body and engine.

It can then be assumed from the foregoing that at worst these two vehicles, the Cadillac Seville and Lincoln Versailles have at least $2,500.00 "pure" profit per vehicle over their most basic counterparts. It can therefore be concluded that the automotive industry establishes prices on image and concept rather than cost-value relationships in this instance. Indeed, when Cadillac introduced the Seville, three basic philosophies came into focus:

1. First was a desire by General Motors to avoid what happened to Packard when they introduced the "Baby Packard" which was priced considerably lower but carried the Packard nameplate. This smaller version destroyed the prestige of the larger Packard, and eventually hastened the demise of the Packard Motor Car Company.

2. The second consideration was the Cadillac Seville's targeted competition, the Mercedes-Benz type vehicle offerings. The Mercedes-Benz models are generally priced well above the Cadillac price range.

3. The third was Cadillac's desire to offer this carline not as a substitute for their current offerings, but for incremental sales.

3. MARKETING SEGMENTATION

3.1 SEGMENTATION OF THE PRODUCT

Product segmentation has taken many forms in the last decade. It has been based on vehicle size, seating capacity, and price. Today, segmentation has taken on the additional aspects of product image and market positioning.

TABLE 3-1. MARKET SEGMENTATION - SMALL AND ABOVE

	Percent of Total Industry Model Year Retail Deliveries					
Size	1971	1972	1973	1974	1975	1976
Total Small	40.0	37.1	40.4	45.9	51.8	47.9
Intermediate and Above	60.0	62.9	59.6	54.1	48.2	52.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

The above Table 3-1 illustrates the product swing of the customer's preference to the smaller vehicles. A closer examination of the intermediate segment and those above it follows.

TABLE 3-2. MARKET SEGMENTATION - INTERMEDIATE AND ABOVE

	Percent of Total Industry Model Year Retail Deliveries					
Size	1971	1972	1973	1974	1975	1976
Intermediate	19.9	22.2	22.5	24.3	23.2	26.8
Economy Bus	1.3	1.1	1.2	1.2	1.4	1.4
Standard Full Size	20.9	19.7	17.2	13.5	9.6	9.0
Medium	13.8	15.1	13.6	10.1	8.3	9.3
Luxury	4.1	4.8	5.1	5.0	5.7	5.6
Total	60.0	62.9	59.6	54.1	48.2	52.1

While the above total group of segments have declined 7.9% over the six year period, Table 3-2 clearly illustrates the gaining strength of the intermediates and the decline of the standard full-size cars; the Chevrolet Impala/Caprice, Ford LTD and Plymouth Grand Fury. To a lesser degree, the medium segment has followed the same pattern of consumer acceptance as the standard segment. A closer look at the intermediate segment is required to determine its rise in penetration.

TABLE 3-3. INTERMEDIATE SEGMENT

Percent of Total Industry - Model Year Retail Deliveries						
TYPE	1971	1972	1973	1974	1975	1976
Torino	3.5	4.4	3.8	3.3	1.9	1.8
Elite	-	-	-	.9	1.3	1.4
Montego	.6	1.1	1.2	1.0	.6	.5
Cougar	-	-	-	.8	.6	.8
Chevelle	3.8	3.8	3.0	3.8	3.4	3.4
Monte Carlo	1.5	1.7	2.4	3.1	3.1	3.6
LeMans	1.7	1.7	1.9	1.7	1.1	1.0
Grand Prix	.6	.9	1.2	1.0	1.0	2.2
Cutlass	2.7	3.1	3.1	3.2	3.5	4.9
Century	1.8	2.1	2.3	1.8	1.9	2.9
Cordoba	-	-	-	-	1.4	1.8
Fury	1.5	1.4	1.6	1.6	1.3	1.0
Coronet	1.7	1.5	1.5	1.3	.9	.6
Charger	-	-	-	-	.4	.5
Matador	.5	.5	.5	.8	.8	.4
Total Segment	19.9	22.2	22.2	24.3	23.2	26.8

New carline introductions such as the Ford Elite, the Mercury Cougar, the Chrysler Cordoba, and the Dodge Charger account for 4.5% of the increase in this segment. A closer examination shown in Table 3-4 shows the consumers' growing

preference for the sub-segment within the intermediate segment which is classified as intermediate sized luxury cars.

TABLE 3-4. INTERMEDIATE SEGMENT - LUXURY

Percent of Total Industry - Model Year Retail Deliveries						
Type	1971	1972	1973	1974	1975	1976
Elite	-	-	-	.9	1.3	1.4
Cougar	-	-	-	.8	.6	.8
Monte Carlo	1.5	1.7	2.4	3.1	3.1	3.6
Grand Prix	.6	.9	1.2	1.0	1.0	2.2
Cordoba	-	-	-	-	1.4	1.8
Charger	-	-	-	-	.4	.5
Total Segment	2.1	2.6	3.6	5.8	7.8	10.3

The real increase of 8.2% for these models in the six years is more than the 6.9% increase for the total intermediate segment, illustrating the consumer preference for this type of vehicle image. Additionally, the Oldsmobile Cutlass and Buick Century have taken on a luxury connotation which may be the reason for their increases of 2.2% and 1.1% of the total market.

These segments and sub-segments are in a constant state of change, especially with repositioning and sub-entries. In the 1977 model year, Ford down-sized its Thunderbird and priced it competitively in the intermediate luxury market. Each manufacturer segments differently according to its own product offerings. For example, Chevrolet, with its Chevette, might be thought to have a segment called sub-subcompact or mini since it already has a sub-compact offering with its Vega. Ford, on the other hand, with only the Pinto, places both the Vega and Chevette in the same segment. However, Ford placed its base Pinto list price at a position between the Chevrolet offerings. The list price of the Chevrolet Chevette for 1977 is $2,999; the Ford Pinto is $3,099; and the Chevrolet Vega is $3,249.

3.2 POSITIONING IN THE MARKETPLACE

How the automobile manufacturer merchandises and advertises the product has a considerable influence on how the consumer categorizes a product offering. The manufacturer tries to place the vehicle in the most advantageous position to realize its volume potential.

Ford's marketing approach with the Granada has taken two forms. First, Ford, by advertising, has placed the Granada against the Cadillac Seville to depict the size and style comparison. The television advertisements have illustrated people getting confused and entering the wrong car. Secondly, the television advertising has depicted the quality of the Granada versus the Mercedes-Benz. A Ford Granada is shown being road tested for sound and tightness in Germany by German engineers with a Mercedes alongside. Throughout both of these promotional television spots, Ford has emphasized the low price of the Granada. In size, the Granada compares favorably with the Chevrolet Nova.

TABLE 3-5. PRICE POSITIONING

4 Dr. Sedan	1977 Retail Price
Nova Concours	$4,066
Granada	$4,088
Malibu Classic	$4,475
Granada Ghia	$4,518

In Table 3-5, the Granada price positioning is shown relative to two competitive Chevrolet models. With this type of positioning, Ford was able to place their low series Granada just over the high series Nova. Also, they placed their high series Ghia over the high series Chevelle Malibu Classic. Ford was very successful with this approach by selling over 404,000 units for the 1976 model year. Positioning alone was not the entire reason for success; timing and the proper styling were

large contributors. Timing was important in that the Granada was introduced not much later than the Cadillac Seville. As for styling, the vehicle does resemble the Cadillac Seville and Mercedes-Benz.

Another example of positioning is the all new, down-sized General Motors standard-sized cars offered for 1977. GM has taken approximately 700 pounds in weight out of their vehicles and has increased the price approximately $700. The new Chevrolet Caprice is now closer in size to the Chevrolet Chevelle. Chevrolet, in its advertising of the new Caprice, is saying, "Now that's more like it." This positioning move by General Motors has been highly successful. We will see more of this as down-sizing continues in future model years.

4. DEALER RELATIONS

4.1 DEALER INCENTIVES

4.1.1 Dealer Incentives-Cash

Dealer incentives usually take two forms: direct cash rebates, and award trips and merchandise prize points. Automotive manufacturers seldom want to make cash payments to the dealers. However, sometimes it becomes necessary to make rebates to reduce inventories or keep certain plants in production. The manufacturer would rather make additional cash payments than reduce the base price of the vehicle. For example, Chrysler Corporation has a desire to keep a certain plant in production which is building a product for which few dealer orders are being received. This particular plant keeps producing vehicles without orders and places them in finished product inventory. In this situation, Chrysler Corporation tells the dealers that for each of these vehicles they order, the dealer price will be reduced by a stated amount. This has been known to be as much as $150.00 per vehicle for a stated time period. Also, in some instances Chrysler will add an additional dollar rebate for each of these cars sold and delivered by the dealer during a certain time frame. Generally, these programs last no more than three months. The cost of these programs can be considerable, but when weighed against plant shutdown or sales cut-backs and loss of penetration, they may be the preferred course of action.

Another form of cash payment which is made, but is not considered an incentive, is the end of the year rebate. It is industry practice to pay the dealer a 5% rebate on all unsold vehicles in dealer stock carried over from one model year into the next model year.

4.1.2 Dealer Incentives - Awards

The other dealer incentive is the award trips and so-called "pots and pans" merchandising gifts. The duration of these programs is usually 60 to 90 days. A typical example of

this type incentive is the recent Chevrolet "Take Charge '77" campaign, which started April 25, 1977 and lasted through July 10, 1977 for a total of 77 days. Each dealer was assigned a retail delivery objective for new cars and trucks for the period. Depending upon his prior sales experience and volume, he was placed in competition with dealers of similar objectives. Each dealer was required to pay an enrollment fee depending upon his classification in competition with other dealers. This varied from $150 to $300.

The winning dealers had their choice of three travel destinations fully paid by Chevrolet. They were:

Jerusalem/Tel Aviv (10 days/9 nights)
Montreux/Interlaken, Switzerland (8 days/7 nights)
Ocean Reef Club, Key Largo, Florida (8 days/7 nights)

As many as 1,000 dealers out of approximately 6,000 could have won these group trips.

There was similar competition for the dealership's Sales Managers. However, their objectives were slanted towards meeting or exceeding small car and truck objectives (Vega, Monza, Chevette, and Luv truck units) since these types were not meeting factory sales objectives. The enrollment fee for the Sales Manager was $25.00. Their reward for meeting or exceeding the objective was a zone-sponsored Honor and Recognition Award.

Salespersons also participated at the dealership. For each car that he sold during the campaign, the salesperson was awarded prize points. These prize points were used for redeeming merchandise, cash or personal travel to places like San Salvador for four days and three nights. The dealer paid for the prize points at $5.00 for 1,000 points.

These types of incentive campaigns have been going on in the automotive industry for the last twenty years. Usually, there are two programs each model year for each car division, especially Chevrolet and Ford. The dealership body has come to expect this type of incentive as a common practice. For years Chevrolet has had incentive campaigns for the periods

January-February and May-June and the same approximate periods have been true for Ford Division. There is doubt by some automotive management personnel whether these programs are worth the cost involved but they have become institutions in their own right.

4.2 CONSUMER INCENTIVES

4.2.1 Consumer Incentives-Cash

Cash incentives are also provided to the consumer and are usually offered on phased-out carlines or extremely slow selling vehicles. An example of a phase-out payment is the $400 credit certificate given when an Edsel was purchased after announcement of its discontinuance. This certificate was good toward the purchase of another Ford product. The same basic offers were applied to the DeSoto and Corvair carlines when they were discontinued.

Another cash incentive is a direct payment from the manufacturer when a person purchases a vehicle. For example when, a 1977 Vega was purchased, the customer had the choice of applying the cash amount towards the down-payment or receiving cash a short time later from Chevrolet. The manufacturer does not like to make these payments; however, it is much preferred over sticker price reduction.

AMC recently announced another example of cash incentive, a $200 rebate to a new-car buyer who purchased air-conditioning with the car. This type of incentive is usually tied in with high list price, high profit options.

4.2.2 Consumer Incentives-Awards

Consumer incentives usually take the form of merchandising gifts. These awards are usually of promotional nature, such as a household knife set for taking a test drive in a certain car. Most of this is accomplished on a direct-mail basis, usually to a car owner of the competitive, similar type vehicle being promoted. For example, if a Chevrolet Camaro were being promoted, the direct mail literature would go to Ford Mustang owners of vehicles two or three years old. Possibly the largest incentive of this

type is the current promotion by AMC to the consuming public. This promotion has been highly publicized on television in conjunction with American Airlines. Fully paid trips are offered for the purchase of certain AMC models.

4.3 SALES TRAINING

Sales Training Programs normally educate the dealer salesmen in order that the product be intelligently presented. With the high attrition rate of salespersons, the manufacturers frequently introduce a mini-screen presentation of its products. When a customer desires knowledge about a certain product, the salesperson shows the customer a cassette television tape featuring a comprehensive presentation of the product. One reason that such a presentation is necessary is because of the proliferation of carlines within a dealership which makes it very difficult for salespersons to know all of the features of all of the carlines versus the competition.

4.4 DEALER FRANCHISE - PLANNING POTENTIAL

Each car division of the automotive manufacturers has departments which study population location, area demographics, and vehicle usage. New car registrations are also analyzed for each area. These departments are sometimes called Dealer Representation or Dealer Development Departments. The analysts also establish the performance of the competition in the area. These departments, or others called Sales Analysis, establish the Planning Potential for the area. Planning Potential is based on national penetration of the particular carline, the Zone/District penetration of the carline, and total registrations within the area.

TABLE 4-1. DEALER PLANNING POTENTIAL

A hypothetical example for Ford is:

Area	Penetration	Weight	Total
National	20.0%	1	20.0%
District	22.0%	2	44.0%
All Units in Operation (U.I.O.)	21.0%	7	147.0%
			211.0%
Dealer Planning Potential	211.0% ÷ 10 = 21.0%		

The example shown in Table 4-1 is oversimplified, but is basically how the Planning Potential is established. The Planning Potential becomes very complex in major metropolitan markets where many dealers are responsible for the total potential of the area.

The Planning Potential is part of the Dealers Sales Agreement with the manufacturer, whereby a dealer agrees to the volume implications. Also, part of the Sales Agreement is the facilities requirement of the dealership. For example, a potential of 600 new units must have so many service stalls, so much quantity of spare parts in inventory, and a quantity of selected vehicles offered for sale from stock, etc..

When the Area Planning Potential is greater than the sum total of that of the dealers within the area an "open point" is established. This can be filled in two ways: 1) by establishing a new dealer in the area to pick up the potential; or 2) by having existing dealers realize the potential most frequently through facility expansion.

5. SUMMARY AND CONCLUSIONS

5.1 NEW MODEL INTRODUCTIONS

Since 1959, the last year for the traditional alignment of producers models, the market has featured a proliferation of models that have segmented the total market. Indeed, by 1964, the Chevrolet Division alone had as many carlines as all of General Motors in 1959. Until recent years the introduction of a new model has been a reaction on the part of a manufacturer to a perceived market opportunity. Considering the time necessary to develop a new model, its introduction has frequently lagged by several years behind the opening up of the market possibility. In recent years, new model introduction has relied heavily upon the results of formalized market research efforts which seek to identify market areas in which the sales volume potential is great enough to allow production of a specialized model. Also, product planning operations are presently practiced by all manufacturers and are directed at defining the exact nature of each newly developed model - its dimensions, performance, accessories, and features. In contrast to twenty years ago, the new models introduced today are targeted to well defined, recognized segments of the auto buying public. The old "art" of new model introduction has become a new "science" as presently practiced by manufacturers.

5.2 PRICING

The general level of automobile retail prices has generally been controlled by General Motors, particularly the Chevrolet Division which has historically been the largest selling division. Competitive models are priced very near each other; their spread usually falls within a $200 range on the base car. Optional accessory equipment is also priced competitively; the same item will vary only 10 dollars or so among the various manufacturers. Some gain in profitability is made by including traditionally optional equipment as standard on luxury models. The manufacturer gains in production volume on the options that are included as standard and profits are very much a function

of production volume.

The most latitude in pricing is afforded in the upper, luxury end of the model spectrum. The Cadillac Seville and Lincoln Versailles, both based on basic compact car models, are priced so that very large margins of profit are obtained even at the relatively modest volumes that these cars are sold.

5.3 MARKET SEGMENTATION

Whereas two decades ago the automotive industry offered only two model size ranges, there are now at least five sizes: sub-compact, compact, intermediate, standard, and luxury. As a general trend over the last ten years, the total of smaller cars sold has been increasing while the total of intermediate and large cars has been decreasing. This trend is expected to continue in the years ahead as selling prices, fuel, and operating costs continue their inevitable rise. Whether or not some of the size classes disappear in the ensuing years is not clear; certainly all classes of cars will become slightly smaller and much lighter as the emphasis on fuel economy continues.

Manufacturers today attempt to position new offerings very carefully in the marketplace. An advantage is believed to be achieved when a car can be priced relatively low but associated in size, appearance, or features with cars of a higher price class. Thus, Ford has attempted to associate their relatively low priced Granada with the much higher priced Cadillac Seville and Mercedes-Benz line.

5.4 DEALER RELATIONS

The manufacturers offer various sales incentives to their dealers which take two basic forms--cash or awards. In extreme cases, cash rebates are offered on models which are selling poorly. However, the manufacturers much prefer to offer awards for outstanding performance in carefully established sales contests. The awards may go to dealers or to their sales managers or salesmen.

Sometimes the incentives are extended to the final consumers. Again, they are in the form of cash rebates or awards. The generally poor selling rates of 1975 resulted in an unusually large number of consume. incentives during that model year.

The sales performance of each dealer is compared with a Planning Potential established for it by the manufacturers. The establishment of the Planning Potential has become quite sophisticated. It serves as the basis for evaluating the need for additional dealerships, their location, and their size. The entire investment made in a dealership, including sales and service facilities, is based on the Planning Potential.

Year	Chevrolet	Pontiac	Oldsmobile	Buick	Cadillac	Ford	Mercury Lincoln	Chrysler Plymouth	Dodge	AMC
1960	Corvair					Falcon	Comet	Valiant		
1961		Tempest	F-85	Special					Dart	
1962	Chevy II Nova					Fairlane	Meteor			
1963				Riviera						
1964	Chevelle					Mustang		Barracuda		
1965								Belvedere	Coronet	Marlin
1966			Toronado						Charger	
1967	Camaro	Firebird		Eldorado			Cougar			
1968							Mark III			AMX-Javelin
1969		Grand Prix				Maverick				
1970	Monte Carlo								Challenger	Gremlin
1971	Vega	Ventura II				Pinto	Comet			
1972										
1973			Omega	Apollo						
1974						Mustang II				
1975	Monza	Astre	Starfire	Skyhawk	Seville	Granada	Monarch Bobcat	Cordoba	Charger	Pacer
1976	Chevette	Sunbird						Volare	Aspen	
1977						LTD II				

MODEL YEAR RETAIL DELIVERIES BY MARKET SEGMENT, 1971-1976, UNITS IN THOUSANDS (SHEET 1 of 3).

Market Segment	1971			1972			1973			1974			1975			1976		
	Units	% Ind.	% Seg.	Units	% Ind.	% Seg.	Units	% Ind.	% Seg.	Units	% Ind.	% Seg.	Units	% Ind.	% Seg.	Units	% Ind.	% Seg.
Imports																		
Volkswagen	511.1	5.6	34.2	401.4	3.8	27.4	469.9	4.0	26.7	339.0	3.5	23.6	283.7	3.4	18.3	177.1	1.8	12.6
Big "3" Captive																		
Cortina	1.6	*	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Capri	50.8	0.5	3.4	81.0	0.8	5.5	111.9	1.0	6.4	82.1	0.9	5.7	63.5	0.8	4.0	32.1	0.3	2.3
Pantera	0.1	*	*	1.0	*	0.1	2.0	*	0.1	1.2	*	0.1	0.9	*	0.1	-	-	-
Sub-Total Ford	52.5	0.5	3.5	82.0	0.8	5.6	113.9	1.0	6.5	83.3	0.9	5.8	64.4	0.8	4.1	32.1	0.3	2.3
Simca-Rootes	6.7	0.1	0.4	2.5	*	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Cricket	18.1	0.2	1.2	21.7	0.2	1.5	6.4	0.1	0.4	0.2	-	-	-	-	-	-	-	-
Arrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.2	0.2	1.2
Colt	15.7	0.2	1.1	36.4	0.3	2.5	39.8	0.3	2.2	35.1	0.4	2.5	60.0	0.7	3.9	46.8	0.5	3.4
Sub-Total Chrysler	40.5	0.5	2.7	60.6	0.5	4.1	46.2	0.4	2.6	35.3	0.4	2.5	60.0	0.7	3.9	64.0	0.7	4.6
Opel	91.2	1.0	6.1	70.6	0.6	4.8	74.5	0.6	4.2	54.6	0.6	3.8	51.4	0.6	3.3	33.5	0.3	1.0
Sub-Total Big "3"	184.2	2.0	12.3	213.2	1.9	14.5	234.6	2.0	13.3	173.2	1.9	12.1	175.8	2.1	11.3	109.6	1.1	7.9
Japanese	497.0	5.5	33.3	543.9	5.1	36.9	700.0	5.9	39.7	585.6	6.0	40.9	696.3	8.5	44.8	772.2	7.8	55.1
Other	301.4	3.3	20.2	312.5	2.9	21.2	358.0	3.0	20.3	334.9	3.4	23.4	397.4	4.9	25.6	342.7	3.5	24.4
Total	1,493.7	16.4	100.0	1,473.0	13.7	100.0	1,762.5	14.9	100.0	1,432.7	14.8	100.0	1,533.2	18.9	100.0	1,401.6	14.2	100.0
Sub-Compact																		
Pinto	316.7	3.5	50.5	417.8	3.9	49.4	500.4	4.2	46.4	399.6	4.1	43.8	282.1	3.5	43.6	252.0	2.6	37.4
Bobcat	-	-	-	-	-	-	-	-	-	-	-	-	23.0	0.3	3.5	40.2	0.4	5.9
Chevette	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	138.3	1.4	20.5
Vega	243.6	2.7	38.9	334.1	3.1	39.5	453.9	3.8	42.1	385.2	4.0	42.2	229.2	2.8	35.4	148.1	1.5	22.0
Astre	-	-	-	-	-	-	-	-	-	-	-	-	46.7	0.6	7.2	42.0	0.4	6.2
Gremlin	66.4	0.7	10.6	94.3	0.9	11.1	123.5	1.0	11.5	128.2	1.3	14.0	66.7	0.8	10.3	54.0	0.5	8.0
Total	626.7	6.9	100.0	846.2	7.9	100.0	1,077.8	9.0	100.0	913.0	9.4	100.0	647.7	8.0	100.0	674.6	6.8	100.0
Compact																		
Granada	-	-	-	-	-	-	-	-	-	-	-	-	241.3	3.0	17.1	404.5	4.1	21.1
Maverick	251.2	2.8	23.7	245.0	2.3	18.8	276.8	2.4	17.6	245.9	2.5	15.5	143.0	1.7	10.1	133.5	1.4	7.0
Monarch	-	-	-	-	-	-	-	-	-	-	-	-	77.4	1.0	5.5	123.9	1.3	6.4
Comet	60.3	0.7	5.7	68.3	0.6	5.2	77.4	0.7	4.9	85.0	0.9	5.4	51.1	0.6	3.6	32.3	0.3	1.7
Nova	200.5	2.2	18.9	316.6	3.0	24.3	340.8	2.9	21.6	320.0	3.3	20.2	261.1	3.2	18.5	299.9	3.0	15.6
Ventura	30.7	0.3	2.9	66.1	0.6	5.1	81.0	0.7	5.1	66.6	0.7	4.2	47.5	0.6	3.3	58.6	0.6	3.1
Omega	-	-	-	-	-	-	49.6	0.4	3.2	46.5	0.5	3.0	34.9	0.4	2.5	54.1	0.5	2.8
Apollo	-	-	-	-	-	-	25.5	0.2	1.6	49.6	0.5	3.1	56.6	0.7	4.0	98.0	1.0	5.1
Volare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	218.8	2.2	11.4
Valiant	245.1	2.7	23.1	295.4	2.8	22.6	342.7	2.9	21.8	371.1	3.8	23.5	239.7	2.9	17.0	136.5	1.4	7.1
Aspen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160.6	1.6	8.4
Dart	201.8	2.2	19.1	227.1	2.1	17.4	255.6	2.2	16.2	256.5	2.6	16.2	168.6	2.1	11.9	107.8	1.1	5.6
Hornet	69.6	0.8	6.6	85.7	0.8	6.6	125.4	1.1	8.0	140.3	1.4	8.9	92.3	1.2	6.5	91.1	0.9	4.7
Total	1,059.2	11.7	100.0	1,304.2	12.2	100.0	1,574.8	13.5	100.0	1,581.5	16.2	100.0	1,413.5	17.4	100.0	1,919.6	19.4	100.0

*Less than one-tenth of one percent

MODEL YEAR RETAIL DELIVERIES BY MARKET SEGMENT, 1971-1976, UNITS IN THOUSANDS (SHEET 2 of 3).

Market Segment	1971 Units	1971 Ind.	1971 Seg.	1972 Units	1972 Ind.	1972 Seg.	1973 Units	1973 Ind.	1973 Seg.	1974 Units	1974 Ind.	1974 Seg.	1975 Units	1975 Ind.	1975 % Seg.	1976 Units	1976 % Ind.	1976 % Seg.
Small Specialty																		
Mustang	142.4	1.6	11.4	121.5	1.1	14.2	121.9	1.0	62.3	285.9	2.9	53.6	207.9	2.5	33.2	179.3	1.8	24.3
Cougar	56.7	0.6	12.5	50.6	0.5	14.3	52.9	0.4	14.0	-	-	-	-	-	-	-	-	-
Camaro	117.6	1.3	26.0	78.1	0.7	22.0	87.1	0.7	23.1	114.1	1.4	25.0	133.4	1.6	21.3	163.1	1.7	22.1
Monza	-	-	-	-	-	-	-	-	-	-	-	-	86.9	1.1	13.9	112.9	1.1	15.3
Firebird	48.7	0.5	10.8	44.4	0.3	9.7	41.1	0.3	10.9	66.9	0.7	12.5	72.6	0.9	11.6	96.3	1.0	13.1
Sunbird	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44.3	0.4	6.0
Starfire	-	-	-	-	-	-	-	-	-	-	-	-	26.7	0.3	4.3	28.1	0.3	3.8
Skyhawk	-	-	-	-	-	-	-	-	-	-	-	-	28.6	0.3	4.6	29.9	0.3	4.0
Barracuda	24.6	0.3	5.4	17.7	0.2	5.0	19.1	0.2	5.0	10.5	0.1	2.0	0.2	-	-	-	-	-
Challenger	36.3	0.4	8.0	26.9	0.3	7.6	26.7	0.2	7.1	13.1	0.2	2.4	0.4	-	0.1	-	-	-
Pacer	-	-	-	-	-	-	-	-	-	-	-	-	67.8	0.8	10.8	84.2	0.9	11.4
Javelin	26.1	0.3	5.9	25.6	0.2	7.2	28.6	0.2	7.6	23.4	0.2	4.4	1.3	-	0.2	-	-	-
AMX	0.1	*	*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	472.9	5.0	100.0	364.8	3.3	100.0	377.4	3.0	100.0	535.9	5.5	100.0	625.8	7.5	100.0	737.9	7.5	100.0
Total Small	1,612.5	40.0		1,978.2	17.1		4,794.5	40.4		4,463.1	45.9		4,240.2	51.8		4,733.7	47.9	
Economy Bus																		
Ford	20.6	0.2	16.5	22.4	0.2	19.6%	21.1	0.2	15.7	19.8	0.2	15.9	21.9	0.3	20.3	38.0	0.4%	27.0
Chevrolet	13.5	0.1	10.8	16.7	0.2	14.6	20.4	0.2	15.2	19.7	0.2	15.8	22.7	0.3	19.3	26.5	0.3	18.9
Dodge	21.2	0.2	16.9	10.2	0.1	8.9	6.5	0.4	14.6	14.1	0.4	35.4	35.6	0.4	30.3	43.3	0.4	30.8
Plymouth	-	-	-	-	-	-	-	-	-	9.4	0.1	7.5	11.8	0.1	10.1	13.5	0.1	9.6
Volkswagen	67.6	0.8	54.1	44.9	0.4	39.1	45.7	0.4	14.5	31.7	0.3	25.4	23.5	0.3	20.0	19.3	0.2	13.7
Total	124.9	1.3	100.0	114.2	1.1	100.0	111.7	1.2	100.0	124.7	1.2	100.0	117.5	1.4	100.0	140.6	1.4	100.0
Intermediate																		
Torino	116.1	1.3	17.5	464.1	4.4	19.7	461.2	1.8	17.2	322.8	3.3	13.7	158.8	1.9	8.4	180.3	1.8	6.9
Elite	-	-	-	-	-	-	-	-	-	82.1	0.8	3.5	102.4	1.3	5.4	142.2	1.4	5.4
Montego	79.4	0.8	5.1	116.7	1.1	4.9	136.8	1.2	5.2	94.2	1.0	4.0	50.4	0.6	2.7	46.9	0.5	1.8
Cougar	-	-	-	-	-	-	-	-	-	78.7	0.8	3.3	49.2	0.6	2.6	78.5	0.8	3.0
Chevelle	344.6	3.8	19.0	405.4	3.8	17.2	438.1	3.6	13.2	365.3	3.8	15.5	281.5	3.4	14.9	333.0	3.4	12.7
Monte Carlo	135.5	1.5	7.5	186.4	1.7	7.9	282.0	2.4	10.7	305.5	3.1	12.9	253.3	3.1	13.4	353.8	3.6	13.4
LeMans	155.2	1.7	8.6	167.8	1.7	7.9	225.7	1.9	8.6	161.7	1.7	6.9	92.9	1.1	4.9	96.5	1.0	3.7
Grand Prix	55.1	0.6	3.1	94.0	0.9	4.0	140.9	1.2	5.3	99.8	1.0	4.2	78.8	1.0	4.2	214.8	2.2	8.2
Cutlass	241.8	2.7	13.4	327.1	3.1	13.9	467.2	3.1	11.9	310.4	3.2	13.2	287.1	3.5	15.1	479.6	4.9	18.2
Century	161.7	1.8	8.9	220.7	2.1	9.3	268.9	2.1	10.2	180.8	1.8	7.7	158.2	1.9	8.3	281.7	2.9	10.7
Cordoba	-	-	-	-	-	-	-	-	-	-	-	-	112.4	1.4	5.9	176.7	1.8	6.7
Fury	140.5	1.5	7.8	149.1	1.4	6.3	184.1	1.6	7.0	150.9	1.6	6.4	106.3	1.3	5.6	97.2	1.0	3.7
Coronet	151.6	1.7	8.4	158.0	1.5	6.7	174.6	1.5	6.6	130.1	1.3	5.5	70.9	0.9	3.7	54.1	0.6	2.0
Charger	-	-	-	-	-	-	-	-	-	-	-	-	29.6	0.4	1.6	51.4	0.5	2.0
Matador	44.4	0.5	2.4	51.1	0.5	2.2	54.0	0.5	2.1	79.5	0.8	3.2	62.8	0.8	3.3	42.0	0.4	1.6
Total	1,808.2	19.9	100.0	2,360.6	22.2	100.0	2,835.	22.5	100.0	2,358.9	24.3	100.0	1,894.8	23.2	100.0	2,628.7	26.4	100.0
Standard Full Size																		
Ford	855.3	9.4	45.1	747.5	7.5	36.9	777.6	6.6	38.1	487.8	5.0	37.2	297.7	3.6%	37.9	385.3	3.9%	43.0
Chevrolet	711.6	8.1	38.7	1,010.1	9.5	48.1	962.2	8.1	47.2	666.6	6.8	50.9	417.1	5.1	53.1	457.8	4.6	51.1
Plymouth	263.8	2.9	14.4	251.3	2.3	12.0	253.9	2.1	12.5	131.1	1.4	10.0	69.7	0.9	8.9	52.4	0.5	5.9
Ambassador	42.5	0.5	2.4	49.5	0.4	1.9	45.8	0.4	2.2	24.7	0.3	1.9	0.7	-	0.1	-	-	-
Total	1,895.2	20.9	100.0	2,249.3	19.7	100.0	2,019.	17.2	100.0	1,310.2	13.5	100.0	785.2	9.6	100.0	895.5	9.0	100.0

*Less than one-tenth of one percent

MODEL YEAR RETAIL DELIVERIES BY MARKET SEGMENT, 1971-1976, UNITS IN THOUSANDS (SHEET 3 of 3).

Market Segment	1971			1972			1973			1974			1975			1976		
	Units	% Ind.	% Seg.	Units	% Ind.	% Seg.	Units	% Ind.	% Seg.	Units	% Ind.	% Seg.	Units	% Ind.	% Seg.	Units	% Ind.	% Seg.
Medium																		
Mercury	152.2	1.7%	12.3%	164.4	1.5%	10.3%	163.8	1.4%	10.2%	100.8	1.0%	10.2%	67.0	0.8%	9.9%	106.3	1.1%	11.7%
Buick	313.5	3.5	25.3	412.5	3.9	25.8	403.6	3.4	25.1	261.8	2.7	26.5	193.6	2.4	28.5	270.0	2.7	29.7
Oldsmobile	254.4	2.8	20.6	360.1	3.4	22.5	375.6	3.2	23.4	225.1	2.3	22.8	185.9	2.3	27.4	262.9	2.7	28.9
Pontiac	259.3	2.9	20.9	358.8	3.4	22.4	342.3	2.9	21.3	214.4	2.2	21.7	116.9	1.4	17.2	137.8	1.4	15.2
Dodge	105.0	1.2	8.5	124.9	1.2	7.8	128.7	1.1	8.0	74.3	0.8	7.6	43.5	0.5	6.4	38.5	0.4	4.3
Chrysler	153.6	1.7	12.4	178.6	1.7	11.2	192.6	1.6	12.0	110.8	1.1	11.2	71.7	0.9	10.6	93.0	1.0	10.2
Total	1,238.0	13.6%	100.0%	1,599.3	15.1%	100.0%	1,606.6	13.6%	100.0%	987.2	10.1%	100.0%	678.6	8.3%	100.0%	908.5	9.3%	100.0%
Medium Specialty																		
Thunderbird	35.2	0.4%	30.9%	53.8	0.5%	33.1%	80.8	0.7%	42.7%	57.7	0.6%	40.9%	37.2	0.5%	33.3%	48.2	0.5%	37.0%
Corvette	20.7	0.2	18.2	26.7	0.2	16.4	27.7	0.2	14.6	30.3	0.3	21.5	38.6	0.5	34.5	40.3	0.4	30.9
Riviera	29.7	0.3	26.1	36.0	0.3	22.1	30.4	0.3	16.1	22.8	0.2	16.2	15.1	0.2	13.5	18.8	0.2	14.4
Toronado	28.3	0.3	24.8	46.1	0.4	28.4	50.3	0.4	26.6	30.2	0.3	21.4	20.9	0.3	18.7	23.1	0.2	17.7
Total	113.9	1.2%	100.0%	162.6	1.4%	100.0%	189.2	1.6%	100.0%	141.0	1.4%	100.0%	111.8	1.5%	100.0%	130.4	1.3%	100.0%
Luxury																		
Lincoln	35.1	0.4%	13.5%	44.0	0.4%	12.0%	53.1	0.4%	12.6%	40.7	0.4%	11.5%	47.2	0.6%	13.8%	67.9	0.7%	15.8%
Mark IV	26.0	0.3	10.0	46.2	0.4	12.6	63.9	0.5	15.1	56.3	0.6	15.9	41.5	0.5	12.1	54.4	0.5	12.6
Cadillac	159.9	1.8	61.6	223.6	2.1	60.9	241.5	2.1	57.2	203.9	2.1	57.7	191.6	2.3	56.1	216.5	2.2	50.2
Eldorado	27.1	0.3	10.5	38.7	0.4	10.5	48.6	0.4	11.5	39.4	0.4	11.1	40.4	0.5	11.8	48.9	0.5	11.4
Seville	-	-	-	-	-	-	-	-	-	-	-	-	13.8	0.2	4.0	42.3	0.4	9.8
Imperial	11.3	0.1	4.4	14.8	0.1	4.0	15.2	0.1	3.6	13.5	0.1	3.8	7.3	0.1	2.2	1.0	*	0.2
Total	259.4	2.9%	100.0%	367.3	3.4%	100.0%	422.1	3.5%	100.0%	353.8	3.6%	100.0%	341.8	4.2%	100.0%	431.0	4.3%	100.0%
Total Large	5,439.6	60.0%		6,703.4	62.9%		7,026.8	59.6%		5,275.7	54.1%		3,929.7	48.2%		5,134.7	52.1%	
TOTAL INDUSTRY	9,072.1	100.0%		10,681.6	100.0%		11,819.3	100.0%		9,738.8	100.0%		8,169.9	100.0%		9,868.4	100.0%	

*Less than one-tenth of one percent

APPENDIX C
REFERENCES

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4. Motor Vehicle Manufacturers Association - Motor Vehicle Facts and Figures
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   Statistics Department, Motor Vehicle Manufacturers Association, 320 New Center Building, Detroit, MI 48202